AMATEUR

REPAIR MANUAL

Canonet QL25

by Pedro Falcão

FBBANALOGUE

2019

Workbench. Loures, Portugal

I made this manual/document for myself, it was made with the intention of helping me on the next time I open a camera with similar characteristics. This means that I don't take any responsibility if someone use it and damage his own equipment based on this document.

I would like to make it clear that I don't have intentions to became a repairman of any kind of photographic equipment. I just do this for the passion, for the willingness to learn moved by curiosity, and only on my own cameras. And also because I think I have somewhere in my DNA some genes of my Grandfather that was a specialist in all kind of mechanical watches.

I believe that sharing information of all kind, is the best way for all of us to grow and became better humans on this beautifull planet. Sharing is Caring!

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Canonet QL25 (1965). After a full CLA (Clean, Lubricate, Adjust)

Type: 35mm Lens Shutter rangerfinder camera with shutter speed-priority EE
Picture Size: 24 × 36 mm
Normal Lens: Canon SE 45mm f/2.5 (5 elements in 4 groups)
Shutter: Copal SLV; B, 1/15 to 1/500 sec. No self-timer (separate Self-timer 7 used). X-sync flash with German socket.
Viewfinder: Coincidence rangefinder integrated with reversed Galilean viewfinder. Automatic parallax correction with projected frames and marked finder. 0.7x magnification. Viewfinder bottom features aperture scale (f/2.5 – f/16) and match needle correct exposure window/exposure warning indicator.

Exposure Meter and EE: CdS comb-controlled shutter speed-priority EE. Metering range of EV 3.5 – 19 (at ISO 100). Film speed range of ISO 25 – 400. Manual exposure enabled by disabling AUTO.
Power Source: One 1.3 V MP mercury cell
Film Loading & Advance: After opening camera back, film leader is aligned at mark then advanced to first frame with Quick Loading (QL) system. Advances with camera-top lever. (120° single stroke)
Frame Counter: Counts up. Resets automatically when camera back is opened.
Film Rewind: Camera-top crank
Dimensions & Weight: 140 × 79 × 38 mm, 760 g

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Before the CLA

This camera was not working because the blades of the shutter and the blades of the diaphragm was glued with oil. So this camera needs to be full opened, cleaned and adjusted.

I suggest to someone who wants to give it a try, to take a photo any time you remove something during the disassembly. This is fundamental when you start to assemble and understand where all this small parts belongs.

I may say that this is not an easy task, you need to have some hand skills, patience, and some kind of organized mind.

Good luck!

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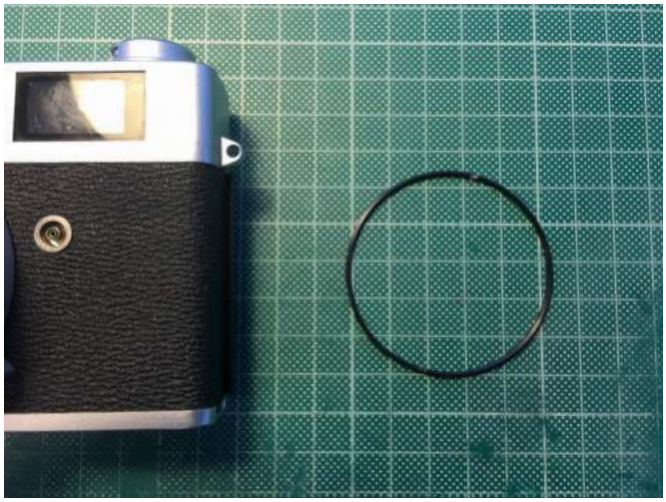
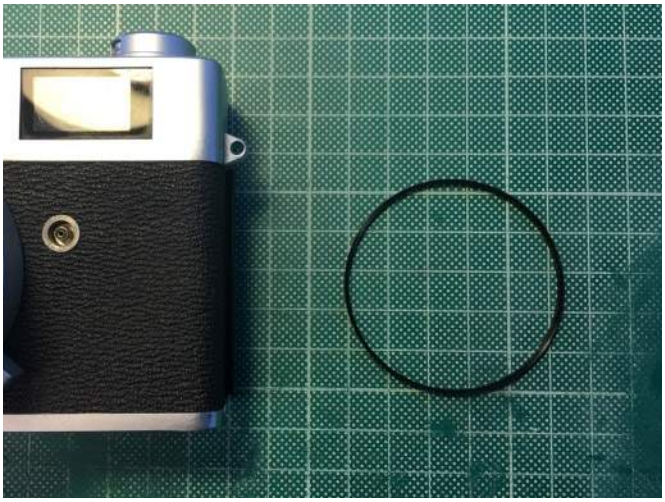


1 — Front ring

First thing to do is to remove the front ring, sometimes this is difficult because they are king of stuked or glued. If you have any difficulties don't use to much strength, its easy to damage this kind of fragile wrings. You can use acetone, or some kind of oil to unstuke. I've read in many places that experts are against the DW40 oil, this is not an oil to lubricate, offcourse, but its very usable to unstuck and to clean. I use it to wash all the metal parts, and after I wash them with water and a degreaser.

2 — Name plate

After the front ring, the name plate it's quite easy to remove. You just take it out.



3 — Second ring

After the name plate you have another ring, easy to came out. Pay attention to the position, beacause you have a correct way to place it.

4 — Light ring

4.1 — Light ring

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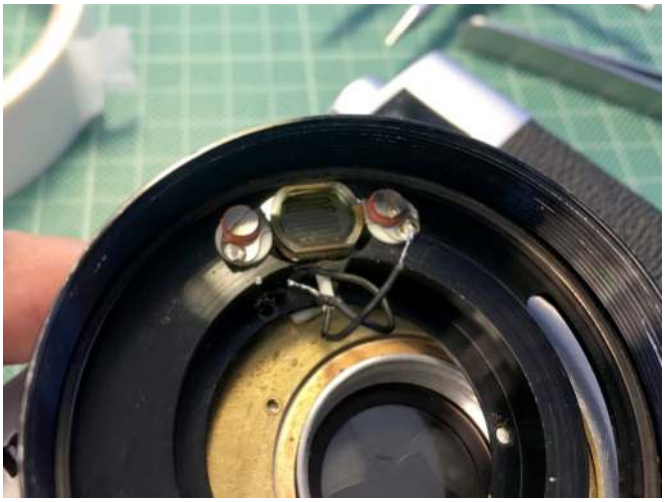
5 — Front lens

6 — Electric Eye (EE) ring



5.3 — Unweld the EE wires

This is the Electric Eye ring. I first recomend to remove the front lens, because you need to unweld the wires of the EE. There's 3 gold screws around the ring, after unscrewing them, you can displace the EE ring.

7 — Remove the speeds and ASA/DIN ring

6.1 — EE wires

There's 2 wires, one each side of the EE.
You need to identify each side they belong.

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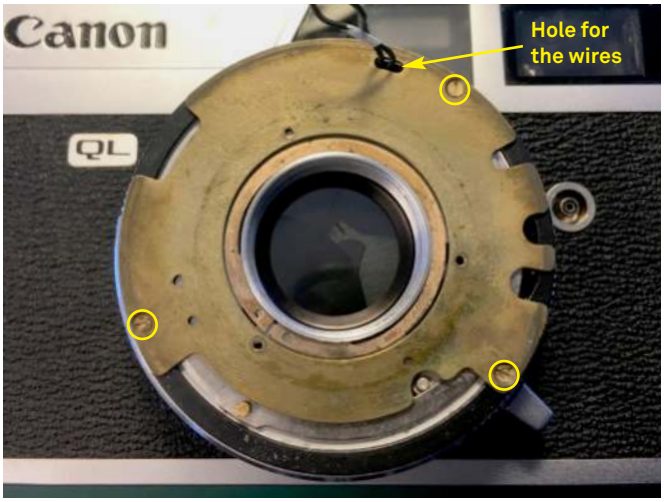
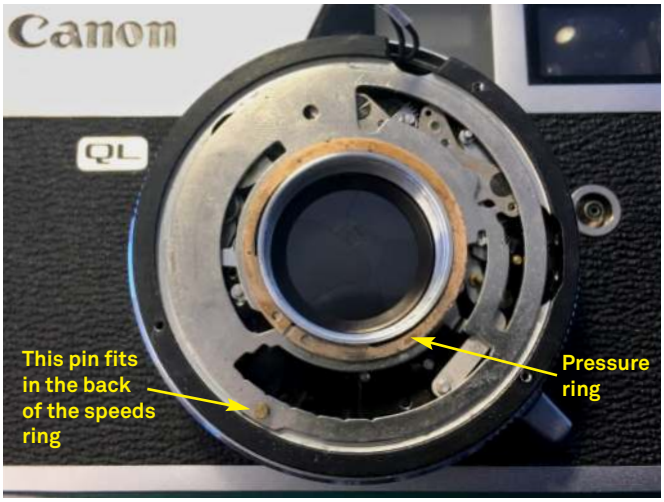


8 — Pressure plate

You have 3 screws to remove this gold pressure plate, easy.



9 / 10 — Speeds plate and pressure ring

There's a pin on this plate, that fits on the back of the speeds ring. Try to understand where, because this is the mechanism to move the speeds from the Bulb to 1/500. To move this plate out you have to remove the pressure ring.

11 — Click spring

Pay attention to the placement of this small piece, (click spring), it makes the speed ring to "click". It's under the speeds plate.

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Place all the pieces on the disassembly order

I think it's really important to organize the order of the disassembly, because you have to make the reverse order to assemble all the pieces together.

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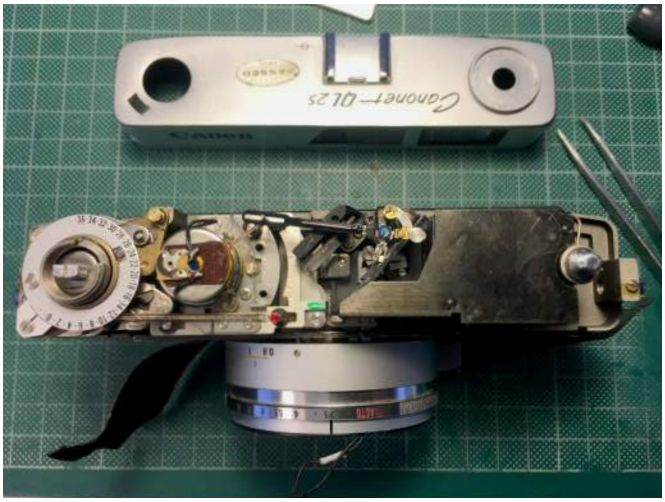
12 — Top cover

Remove the top cover. First you have to disassemble the cock lever, and the rewind lever.

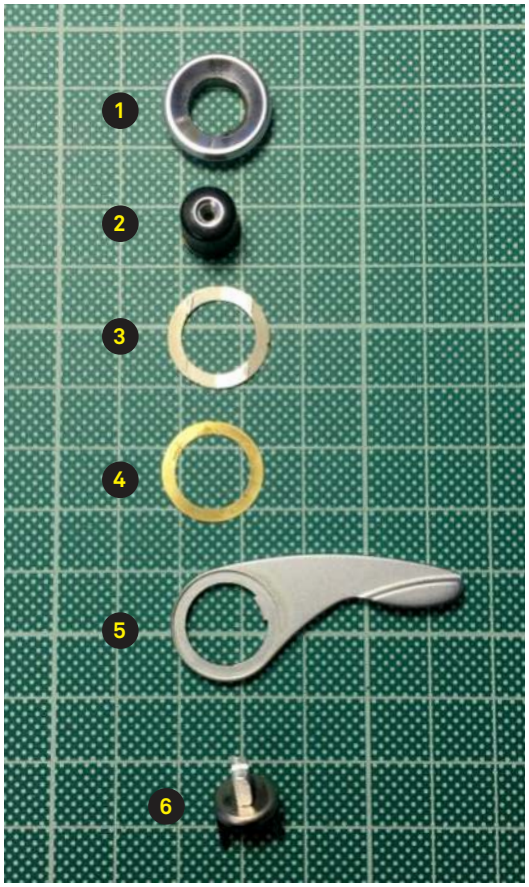
12.1 — Top cover without the cock and rewind lever

12.2 — Top cover, remove this 3 screws

Remove this 3 screws, one on the back and two from the sides.



12.3 — Top cover removed



13 — Cock lever

Keep the disassembly order.

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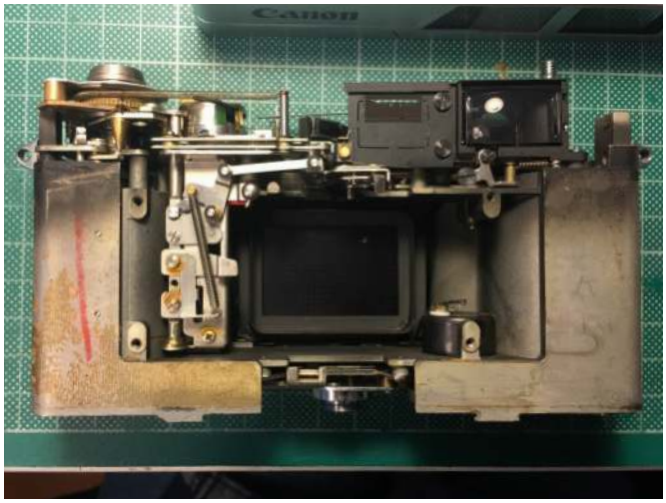
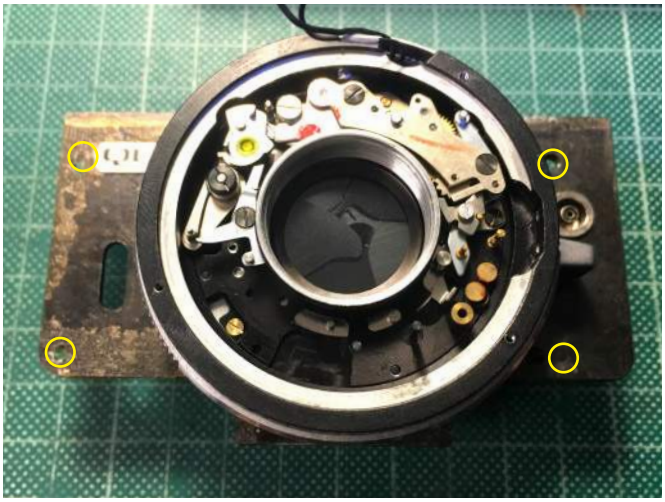
14 — Base plate

To remove the base plate you have 2 screws and one ring to unscrew. After, you need to remove the skin from the front of the body case and remove 4 screws to separate the body from the shutter panel.



15 — Body case

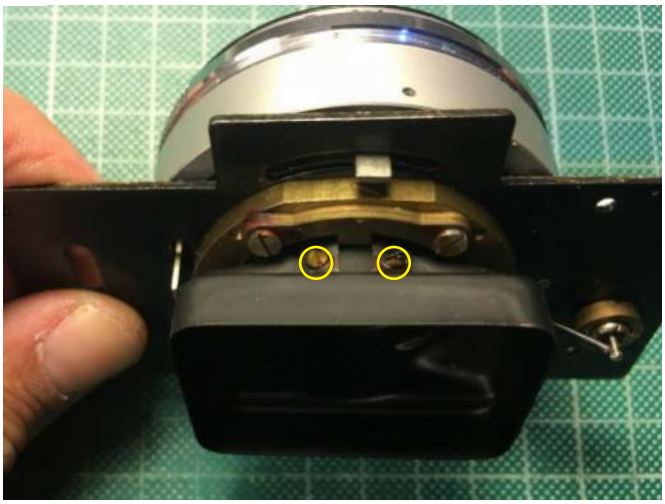
This body case was in good conditions, the only thing I made was clean some dust inside the view finder and the rangefinder system, and made some lubrification on the winding mechanism.



16 — Shutter/Focus panel

I missed the image of the shutter panel attached to the body case without the skin, sorry! Here you can see where the 4 screws must be removed to sepatare the panel from the body case.

On this image you can see the oil on the shutter blades, one of the reasons why this camera was not working.



16.1 — Shutter/Focus panel with light cover

Remove this 2 screws to separate the light cover from the back of the focus panel.

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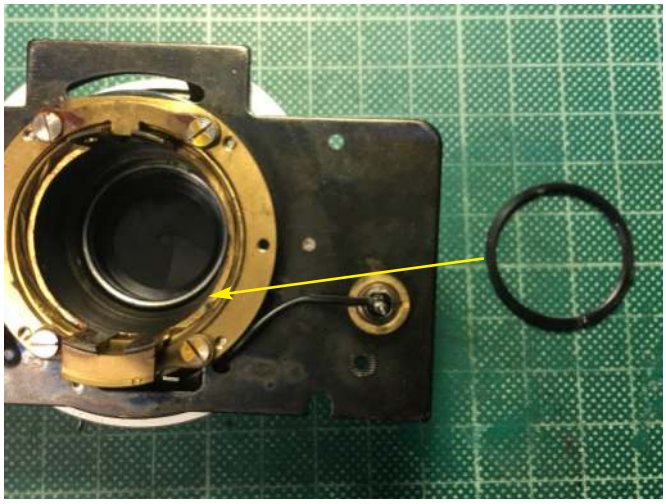
16.2 — Shutter/Focus panel rear lens

Unscrew the rear lens element from the back of the shutter/diaphragm case. Sometimes this is difficult, because there's some glue fixing it. You need some acetone and patience. Don't use to much strenght, otherwise you can easily damage this part.



16.3 — Shutter/Focus panel ring

This ring grabs the focus panel from the shutter/diaphragm case. Unscrew it to separate both elements. This is also difficult most of the times, because there's some glue fixing it. You need again some acetone and patience.

16.4 — Shutter/Focus panel

Now you have 2 parts, the shutter/diaphragm case and the panel with the focus system. Pay attention where the wires come and go, and note which holes they pass by. This is important when you start to assemble.

17 — Focus panel

Unweld the flash wire to separate the focus panel from the shutter/diaphragm case.

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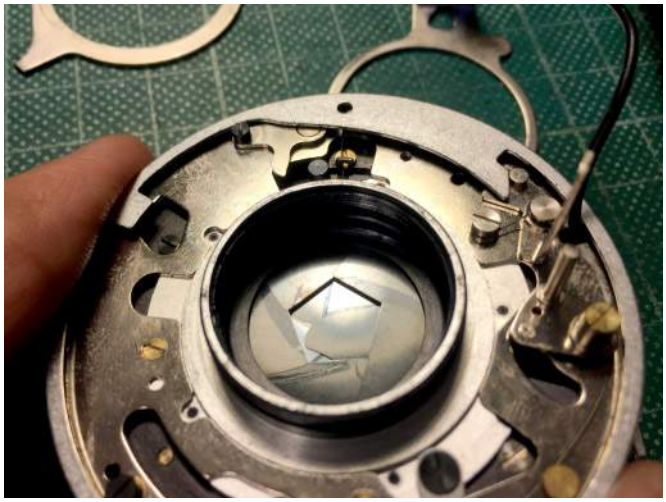
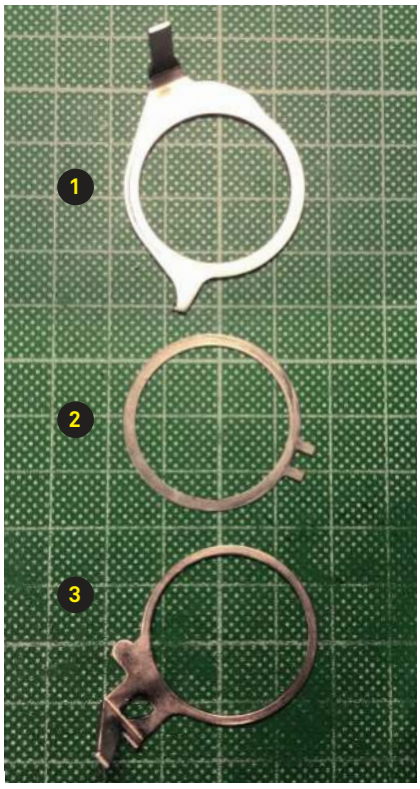


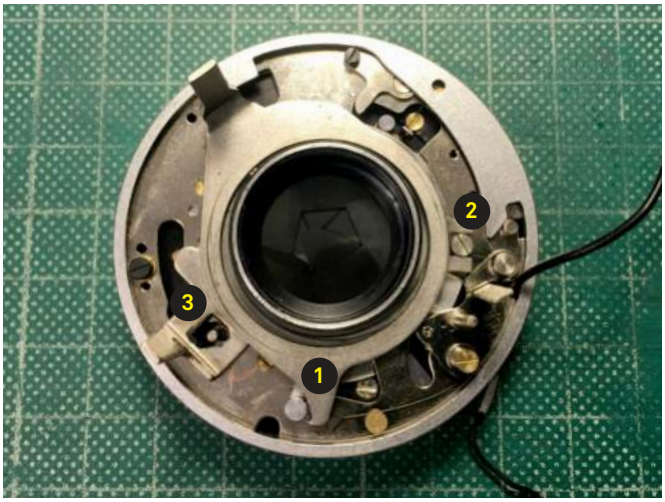
18 — Shutter/Diaphragm case

As you can see by this image, it's not only the shutter blades with oil, the diaphragm blades also have the same problem.



18.1 — Shutter rings

Between the focus panel and the shutter/diaphragm case, you have 3 rings. The placement of this rings have a specific order. Note that all the numbers order that I have on this document is by the disassembly order. To the assembly placement you should use the reverse order.

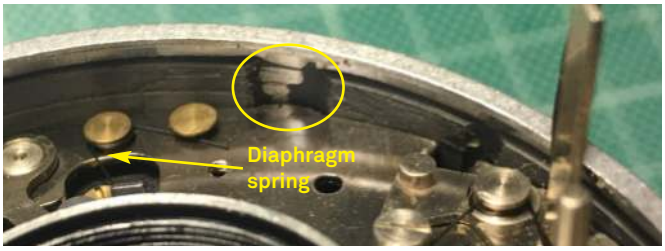


18.3 — Shutter rings order

1 – Ring for shutter charge
2 – Intermediate ring
3 – Ring for shutter release

18.4 — Diaphragm ring

To remove the diaphragm ring you need to unscrew this screw, and turn the ring anticlockwise.



18.5 — Diaphragm ring

When the ring reach this part, pull it out. It's near the diaphragm spring.

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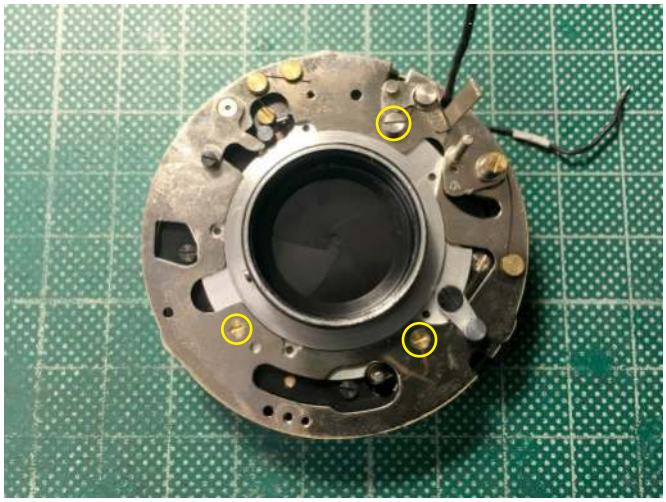
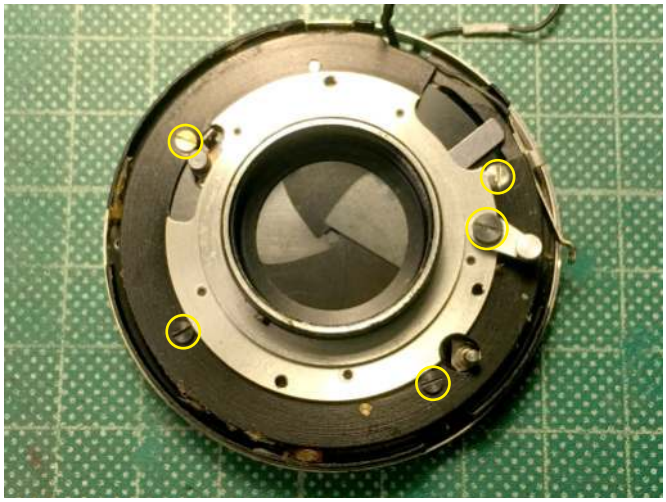


18.6 — Shutter/Diaphragm cover plate

Remove the cover plate, unscrew this 3 screws. Pay attention to the position of the springs, because without the plate, they came off the position.



19 — Diaphragm case

To take out the diaphragm case, you need to remove this 5 screws. Now separate the diaphragm case from shutter plate.

19.1 / 20 — Diaphragm case and shutter plate

Remove the retaining plate from the diaphragm case, take off these 2 screws. Pay attention to the plate position, it's crucial for the assembly.

19.2 — Diaphragm case

The oil is visible everywhere. Remove the diaphragm control ring, pay attention to the position. ***It's now time to start the cleaning process.*** I use benzine, alcohol, and cotton buds.

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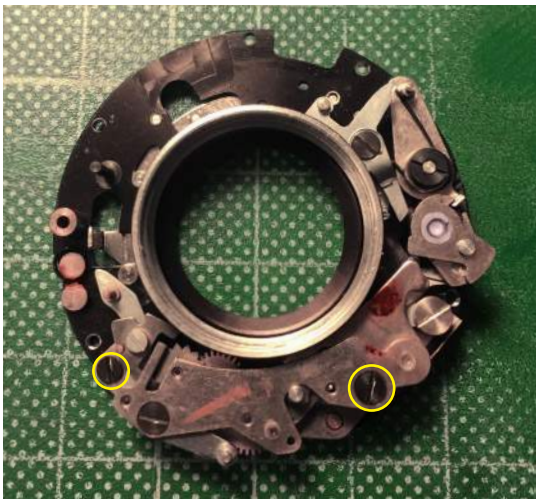
20.1 — Shutter plate, side of the blades

Remove all the blades and clean.



20.2 — Shutter plate, side of the cocking lever

Remove out the slow governor, and clean the plate.

21 — Slow governor

Dive the slow governor in benzine, and make the mechanism work under the liquid.

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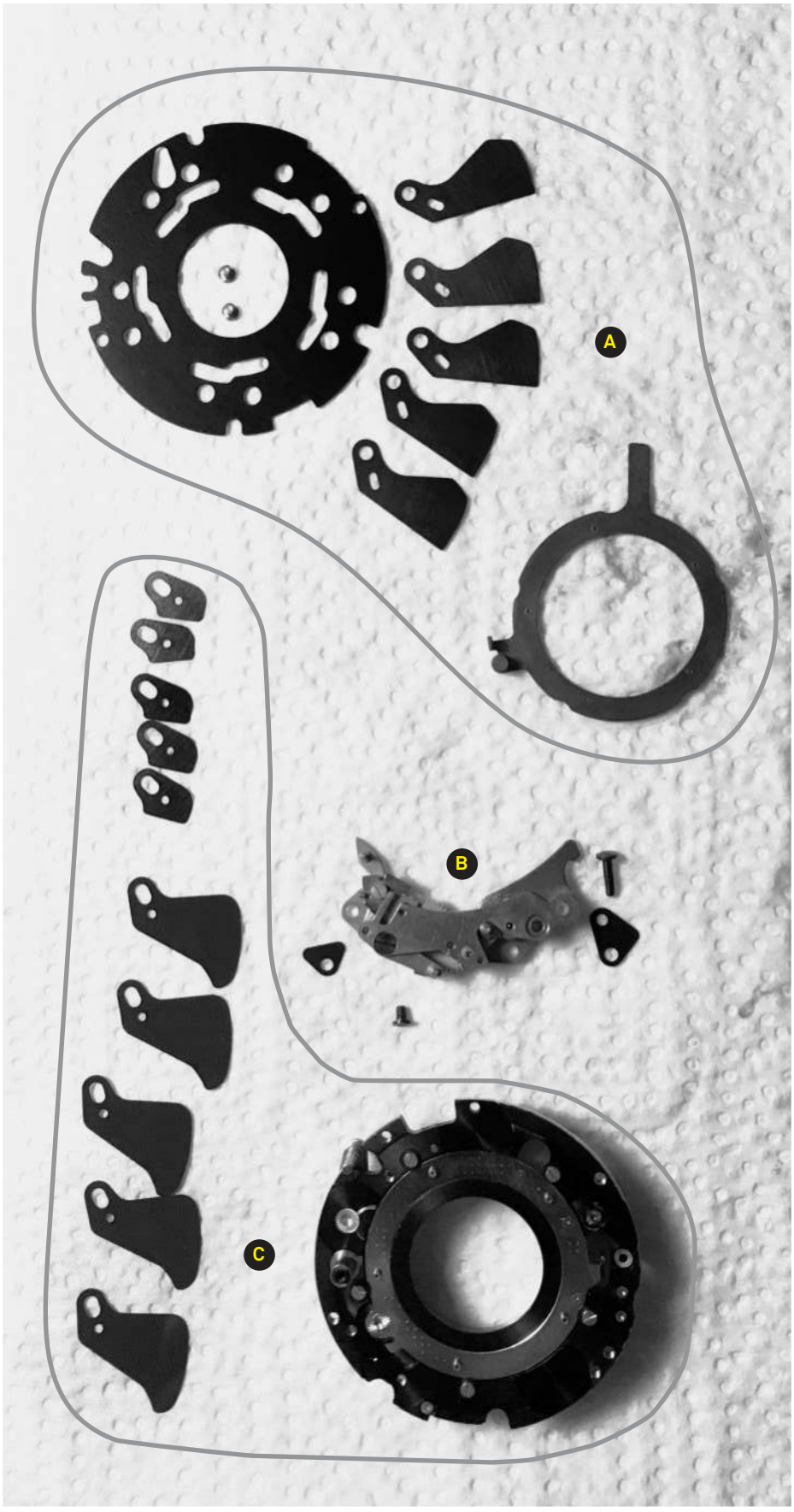

A — Diaphragm pieces; B — Slow governor; C — Shutter pieces

These are the principal parts of the functional mechanism of this camera: the shutter and the diaphram. And this is where the major problem was, oil inside the shutter/diaphragm case.

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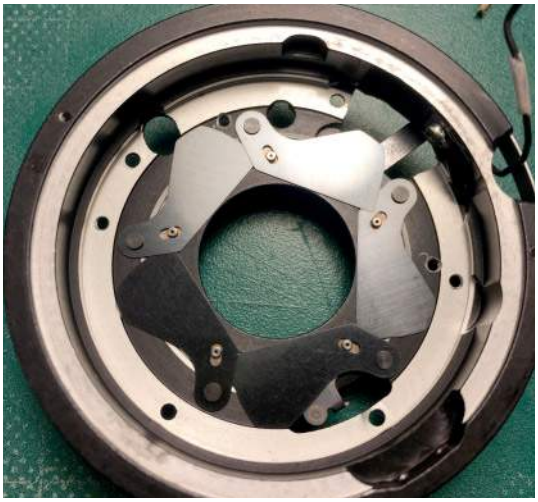
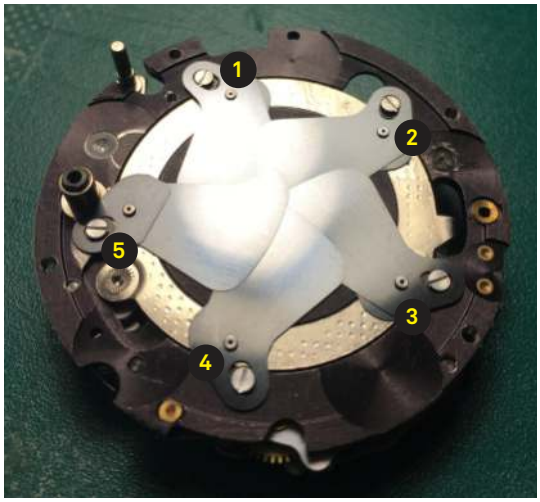


22 — Assembly of the diaphragm blades



23.1 — Assembly of the shutter blades

First insert the diaphragm control ring on the correct position, then place the blades, one by one, one over the other. There's no specific order to make this mechanism work. After, place the diaphragm plate with the 2 screws on the correct possition, see image 19.1/20, page 13.

Then put the blades on the same order of the small blades, and to be shure, the last blade is near the shutter charge. Over the last blade you place the 5th small blade. Now you can start the assemble on the reverse order. I hope you can make it!

23 — Assembly of the shutter blades

24 — Diaphragm plate/ring assembled

First assemble the cleaned slow governor on the side of the cocking lever (other side of the plate). Now comes the hard part... Before you start assembling the shutter blades I suggest you to practice, and try to understand the best way to put together the diaphragm case against the shutter plate. Then you have a specific order to place the blades over the shutter plate. First the 4 small blades, you see on this image, assemble from 1 to 4 clockwise direction.

I think it's allready visible on this images the effect of a cleaned and correct assembled mechanism.

THANK YOU!

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